










## **Airborne Gravity Survey Reveals Significant Additional Greenstone at South Jungar Flats**

***Maiden aircore drilling to commence in the North Jungar Flats tenure in August***

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-  **215km<sup>2</sup> airborne gravity survey completed at the recently acquired southern tenements at the Jungar Flats Project, WA**
  -  **A 25km long gravity high, interpreted to be a prospective dolerite unit, extends through the tenement, with a second gravity high running parallel through the eastern part of the survey area**
  -  **New targets identified, with the southern 15km of the interpreted dolerite located under shallow cover and previously unmapped and unknown to past explorers**
  -  **Dolerite is a very favourable host for orogenic gold mineralisation**
  -  **The next stage of systematic exploration in this under-explored region will be to conduct a soil auger geochemical sampling program over the prospective greenstone units within the southern Jungar Flats tenure to assist with planning for aircore drilling**
  -  **Recently completed soil auger geochemical sampling over the northern Jungar Flats tenements has successfully identified gold, copper and lithium targets for follow-up, with aircore drilling planned to commence in August**
  -  **17,000m of drilling programs at Laverton South are due to be completed in the coming weeks, with results to be reported as they become available**
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### **ASX Code: E79**

Shares on issue: 66M

Market capitalisation: 5.87M

Cash: \$4.49M (31 March 2023)

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West Australian-based explorer E79 Gold Mines Limited (**ASX: E79**) ('E79 Gold' or 'the Company') is pleased to report results from a recently completed large-scale gravity survey over its Jungar Flats Project in the Murchison region of WA.

E79 Gold has 944km<sup>2</sup> of prospective ground spanning two flagship projects, the Laverton South Project in the world-class Laverton gold district and the Jungar Flats Project in the North Murchison region.

**E79 Gold CEO, Ned Summerhayes, said:** *"This survey has provided robust gravity coverage of the recently acquired southern tenements at Jungar Flats, successfully mapping the interpreted position of the highly prospective Big Bell Shear and associated favourable greenstone units.*

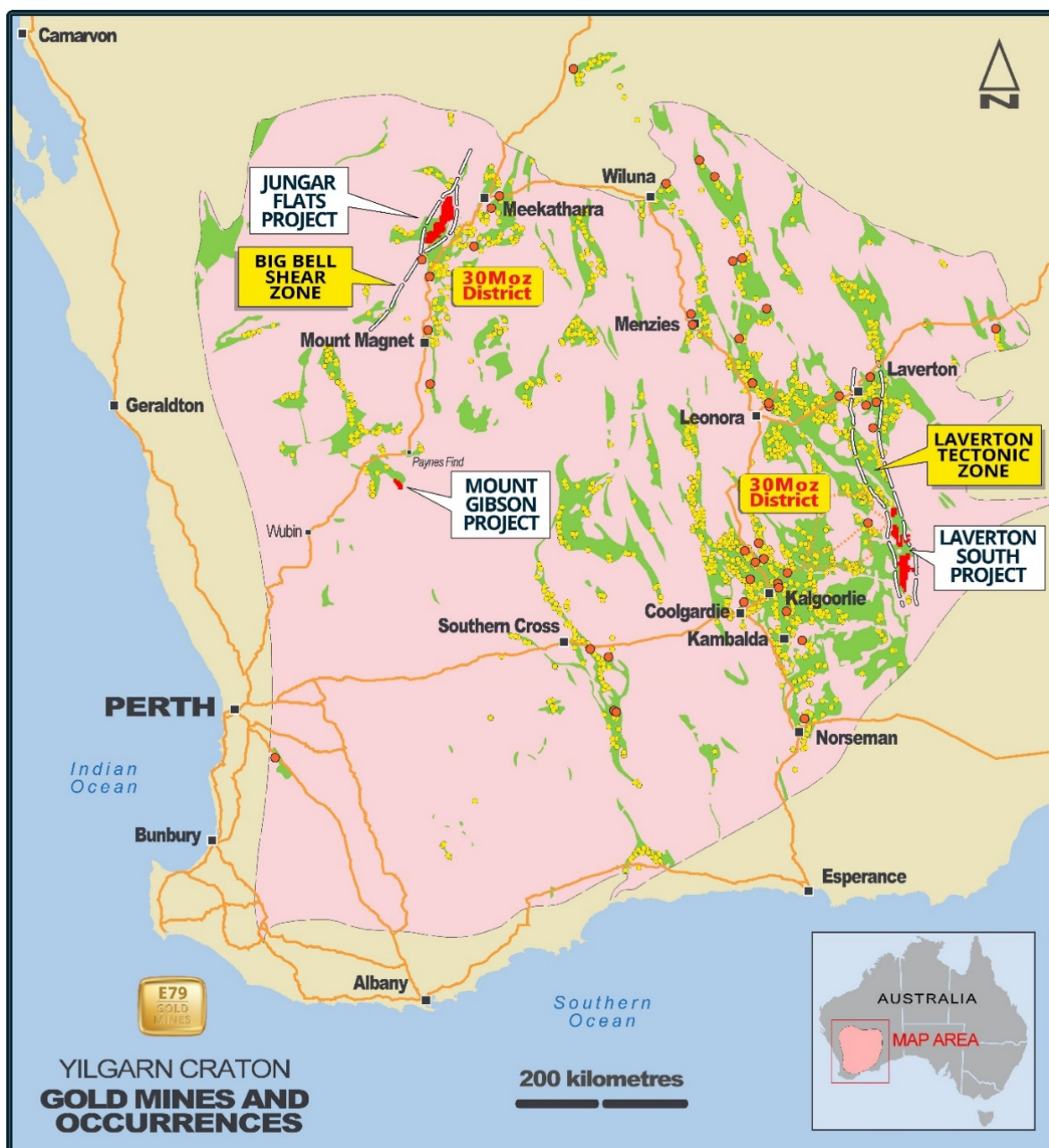
*"Excitingly, the results indicate the presence of an additional 15km of previously unknown interpreted dolerite unit under cover, significantly expanding the prospective stratigraphy within our landholding.*

*"This survey dovetails in with our previous survey to the north and gives us 60km of continuous prospective greenstone stratigraphy to explore, with a parallel greenstone interpreted along the eastern boundary of the survey area.*

*"Historically, small-scale gold mining was undertaken along the larger of the two greenstone sequences, with the eastern greenstone also having historical copper exploration over numerous mapped gossans.*

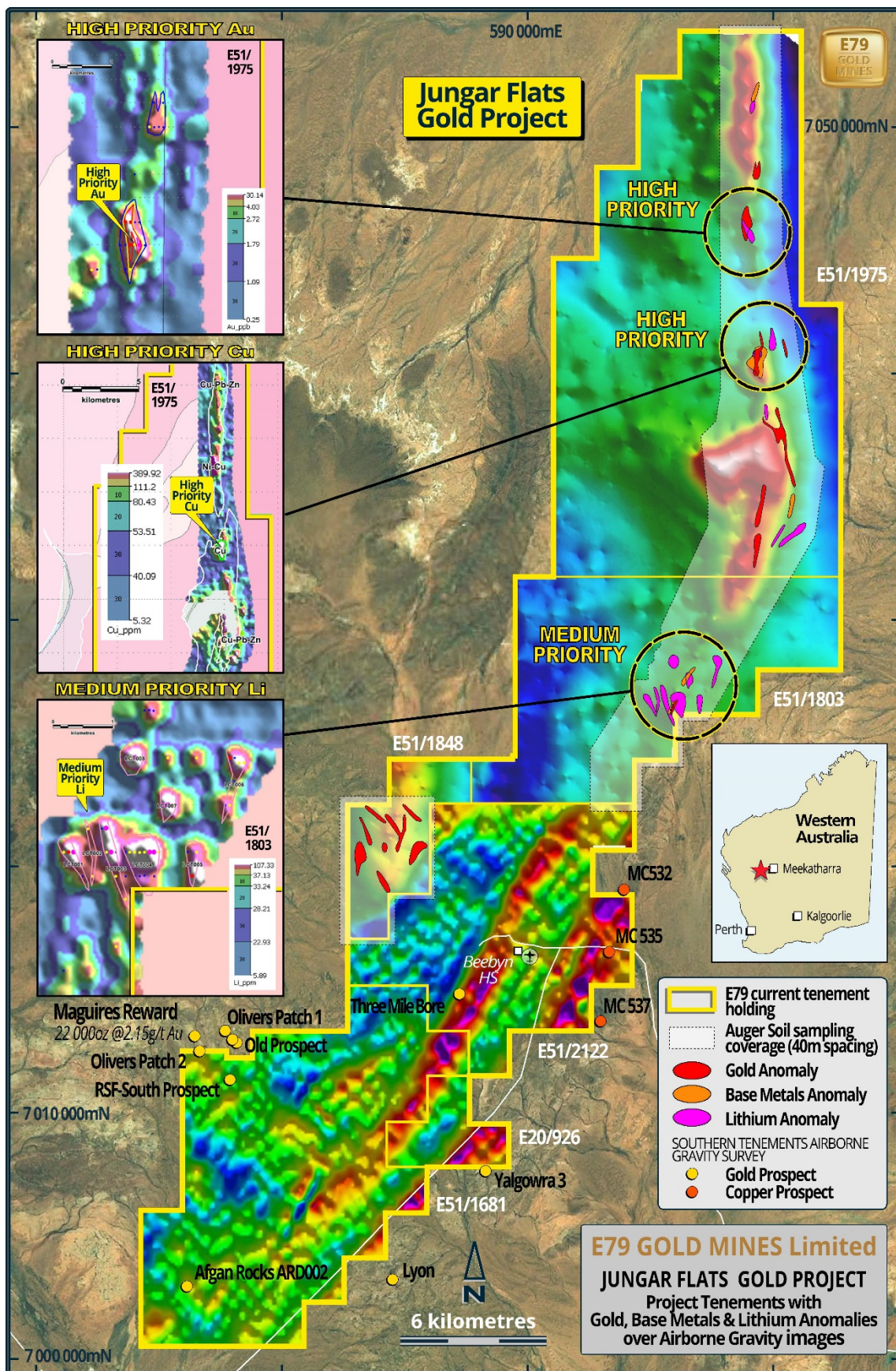
*"E79 Gold will now follow-up with systematic soil auger geochemical sampling over the interpreted prospective greenstone, with any zones of gold anomalism to be tested with aircore drilling. A similar strategy was used at our northern tenements, resulting in the delineation of a number of new gold, copper and lithium drill targets, with drill planning underway and drilling scheduled to commence in August.*

*"At Laverton South, our aircore and RC drilling programs are coming to a close, with 14,500m of the planned 17,000m of drilling now completed. We look forward to releasing the results of these programs as they become available."*



**Figure 1:** Yilgarn Craton Greenstones showing E79 Gold Project locations.





**Figure 2:** Map of the gravity data over the Jungar Flats Project. Recent survey is the southern survey. The interpreted dolerite greenstone sequence is a gravity high in the images (relative levelling between the north and south surveys is yet to be completed).

## Murchison Project

### Jungar Flats

**(E51/1975, E51/1803, E51/1848, E20/0926, E51/2122) 100%,  
(E51/1681) 100% of Mineral Rights (excluding iron ore and ferrous minerals)**

The Jungar Flats Project, in the North Murchison region, is located 70km west of Meekatharra and 45km north-northeast of the 2.8Moz Big Bell gold deposit<sup>1</sup>. The Project tenure covers an area of 541km<sup>2</sup> and contains approximately 60km of strike of the highly prospective Big Bell Shear and associated greenstones.

A 215km<sup>2</sup> airborne gravity survey has now been completed over the recently acquired southern part of the Jungar Flats Project<sup>2</sup>. The survey was designed to more accurately define the location of gold prospective greenstone stratigraphy proximal to the location of the Big Bell Shear Zone. The airborne gravity data was acquired on 400m-spaced lines at an 80m flight height, with flight lines designed to cross-cut stratigraphy at right angles. The survey was completed by Xcaliber Geophysics.

The survey was highly successful in locating the prospective greenstone unit, with the main dolerite running for over 25km through the survey area, and for over 60km through the greater Jungar Flats Project. A second, parallel unit was identified running through the east of the survey area. Both these greenstone units have areas of historical gold and base metals anomalism.

The main dolerite unit hosts some historical gold workings<sup>3</sup> that require further evaluation. The eastern greenstone unit has had previous base metals exploration along a mapped gossan<sup>4</sup>. In the south of the survey area, there is historical gold mineralisation in drilling, with grades of up to 3.61g/t Au within an arsenopyrite altered Gabbro unit<sup>5</sup>. In the central-west of the survey there is a former RAB drilling intercept of 5m @ 1.53 g/t Au<sup>6</sup> at the RSF South Prospect, which sits ~2.5km south-east of the 22,000 ounce Maguires Reward Deposit<sup>7</sup> in the adjacent tenement.

The next stage of systematic exploration will be to test the gold-prospective greenstone rocks with soil auger geochemical sampling. This technique was highly

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<sup>1</sup> Refer to Westgold website

<sup>2</sup> Refer to E79 ASX Announcement 28 September 2022

<sup>3</sup> Refer to WAMEX Report A12397

<sup>4</sup> Refer to WAMEX Report A2453

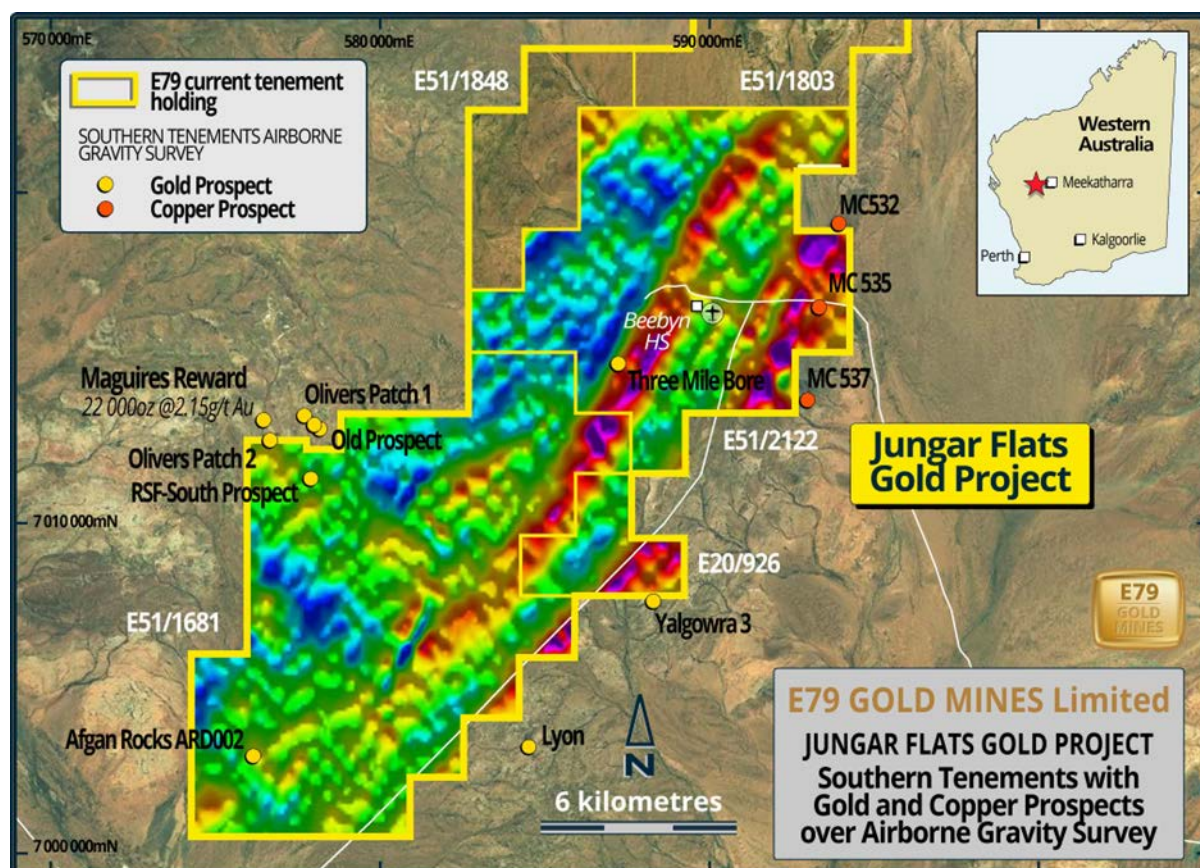
<sup>5</sup> Refer to WAMEX Report A24612

<sup>6</sup> Refer to WAMEX Report A37792

<sup>7</sup> Refer to OZZ ASX Release 19 November 2021



successful in the northern Jungar Flats tenements and has generated robust drill targets (Au, Cu, Li) over greenstone rocks<sup>8</sup>. Samples from the soil auger geochemical sampling program will be analysed using the UltraFine+™ analytical method, which has shown to be more effective at mapping mineral anomalism in areas of hardpan, compared to traditional soil sampling.



**Figure 3:** Jungar Flats Project area showing gravity survey and known historical mineral occurrences.

<sup>8</sup> Refer to E79 ASX Announcement 17 May 2023

## Planned and Recent Activities

E79 Gold is an active explorer with upcoming activities including:

- **June 2023** Ongoing project assessment and review for acquisition opportunities
- **June 2023** Complete 15,000m aircore program at Laverton South
- **July 2023** Jungar Flats field inspection of soil anomalies from auger drilling and greenstone units from current gravity survey
- **August 2023** Commence aircore drilling at Murchison Project

Our motto: Money in the ground.

Yours sincerely,



**Ned Summerhayes**

**Chief Executive Officer**

*The information in this report that relates to Exploration Results is based on information compiled by Mr Ned Summerhayes, a Competent Person who is a member of the Australian Institute of Geoscientists. Mr Summerhayes is a full-time employee, a shareholder and an option holder of the Company. Mr Summerhayes has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Summerhayes consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**Previously Reported Information:** *The information in this report that references previously reported exploration results is extracted from the Company's ASX market announcements released on the date noted in the body of the text where that reference appears. The previous market announcements are available to view on the Company's website or on the ASX website ([www.asx.com.au](http://www.asx.com.au)). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.*

Authorised for release by the CEO of E79 Gold Mines Limited.

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## About E79 Gold Mines

E79 Gold has ~944km<sup>2</sup> of prospective ground within its two flagship projects, the Laverton South Project in the world-class Laverton gold district and the Jungar Flats Project in the North Murchison region.

### Laverton South Project

#### Lake Yindana (100%) and Pinjin (100%)

The Laverton South Project, with an area of 346km<sup>2</sup>, covers a southern portion of the Laverton Tectonic Zone ('LTZ') approximately 130km east-northeast of Kalgoorlie, within the major gold producing Archean Yilgarn Craton of Western Australia.

The LTZ is one of the world's richest gold belts with more than 30 million ounces (Moz) in historical production, Ore Reserves and Mineral Resources and hosts numerous prolific producers including Granny Smith (3.7Moz), Sunrise Dam (10.3Moz) and Wallaby (11.8Moz)<sup>9</sup>.

Within the Laverton South Project are two tenement packages, Lake Yindana and Pinjin. These projects sit within 15km north and south of the ~+1Moz Rebecca deposit (Ramelius Resources), while the Pinjin ground straddles the Anglo-Saxon deposits (Hawthorn Resources) and is located 7.5km south of the historic Patricia open pits (OzAurum Resources).

### Murchison Project

#### Jungar Flats

**(E51/1975, E51/1803, E51/1848, E20/0926, E51/2122) 100%,  
(E51/1681) 100% of Mineral Rights (Excluding Iron Rights)**

The Jungar Flats Project, in the North Murchison region, is located 70km west of Meekatharra and 45km north-northeast of the 2.8Moz Big Bell gold deposit.

The Project tenure covers an area of 541km<sup>2</sup>, including a recently pegged tenement and the tenement that E79 Gold has the mineral rights (excluding iron rights).

This area contains approximately 60km of strike of the highly prospective Big Bell Shear and straddles a narrow north-south trending greenstone belt.

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<sup>9</sup> Refer to E79 Gold Mines Prospectus



# JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g., ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Murchison gravity survey reported consisted of approx. 670 line km, with 400m line spacing, flying east-west flight lines at 80m flight height.</li> <li>• Gravity readings were taken with an Airborne Gravity Gradiometer (AGG) with single near-vertical spin-axis, dual complement Gravity Gradiometer Instrument (GGI).</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>may have occurred due to preferential loss/gain of fine/coarse material.</i>	
Logging	<ul style="list-style-type: none"> <li>• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no samples collected.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• Gravity readings were taken with an Airborne Gravity Gradiometer (AGG) with single near-vertical spin-axis, dual complement Gravity Gradiometer Instrument (GGI).</li> <li>• Terrain corrections undertaken by creating a laser scanned DTM model with 276 samples per line at 20 seconds per scan.</li> <li>• Accuracy is +/- 10cm</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Novatel OEMV-3G 14 Channel GPS, with 0.6-1.8m accuracy and sampling rate of 1 Hz</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Gravity readings were taken at 400m line spacing and 80m flight height</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The survey lines were oriented east west to cross proposed stratigraphy</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable as no samples collected.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews were undertaken, other than those provided by XCalibur Multiphysics</li> </ul>



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Jungar Flats gravity survey was conducted over tenements E51/1681, E51/2122, and E20/926.</li> <li>The tenements are held by E79 Exploration Pty Ltd except E</li> <li>Exploration Lease E51/1681 is granted and held until 2026 and renewable for a further 2 years.</li> <li>Exploration Lease E51/2122 is granted and held until 2028 and renewable for a further 5 years.</li> <li>Exploration Lease E520/926 is granted and held until 2023 and renewable for a further 5 years.</li> <li>All production is subject to a Western Australian state government Net Smelter Return ("NSR") royalty of 2.5%.</li> <li>.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>The previous exploration of the project and its immediate area has been sporadic, with the majority of the work focusing on the Big Bell Shear. Exploration has been dominantly for gold with variable contributions from Kennecott Explorations (Australia) Pty Ltd (1969-1972), BHP Gold (1985-1990), Newcrest Operations Limited (1992-1998), and Gascoyne Resources (WA) Pty Ltd (2012-2014). Work conducted by these companies comprised initially surface geochemical sampling, rock chip sampling, geological mapping, geological interpretations from broad-spaced aeromagnetic surveys and followed by regional RAB and aircore drilling.</p>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>The Jungar Flats Project is located 70 km west of Meekatharra, in the Murchison Province of the Archean Yilgarn Craton. The project area is considered prospective for orogenic gold mineralisation. Significant historical gold production in the Murchison includes the following mines and mining fields – Meekatharra/Paddys Flat, Bluebird, Big Bell, Cuddingwarra, and Day Dawn/Cue. The Jungar Flats</p>

Criteria	JORC Code explanation	Commentary
		Project area covers the interpreted northern extensions of the Big Bell Shear which is interpreted as an important structural control on the Big Bell gold deposit some 45 km to the southwest.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</i>	
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate maps are included within the body of this report.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Relevant geological observations are included in this report.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Additional geophysical surveys may be carried out in the future in order to assist in the delineation of drilling targets.</li> </ul>